

TAXONOMY AND COROLOGY OF SPECIES *Juncus* L.
SECT. *Ozophyllum* Dumort. (*Juncaceae*)
OF BESSARABIA'S FLORA

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Key words: Bessarabia's flora, *Juncus* species, *Ozophyllum* section

Abstract: In this paper are presented 5 species of *Juncus* L., which belong to the section *Ozophyllum* Dumort., identified in the Bessarabia's flora.

Section *Ozophyllum* Dumort. is one of the biggest and most polymorphous in subgenus *Septati* Buchenau. It includes approximately 110 species with holarcto-holantarctic area.

Only 2 species were cited for Bessarabia's flora from this group: *Juncus articulatus* L. and *J. atratus* Krock. As a result of field investigation, working up of herbarium from Moldova and the Ukraine (State Universities of Chernauts and Odesa) it was determined that section studied includes 5 species, which are distributed in 2 subsections.

Key for species determination

- 1.a. Rhizome absent. Leaves filiform, up to 0.8mm in diameter, imperfectly septate *J. bulbosus* L.
- 1.b. Rhizom present. Leaves more than 1mm in diameter, perfectly septate 2
- 2.a. Capsule with a beak ca 1mm in lenght. Perianth-segments long acuminate . . . 3
- 2.b. Capsule with a beak up to 0.5mm in lenght. Perianth-segments obtuse or short acuminate 4
- 3.a. Stems usually slightly compressed, with 2-3 basal sheats. Inner perianth-segments longer than the outer *J. acutiflorus* Ehrh. ex Hoffm.
- 3.b. Stem cylindrical. Basal sheats absent. Perianth-segments equal *J. atratus* Krock
- 4.a. Perianth-segments obtuse. Capsule elliptic, obtuse, with a short beak *J. alpinoarticulatus* Chaix
- 4.b. Inner perianth-segments obtuse with hyaline margins, those outer mucronate. Capsule ovoid, acute, mucronate *J. articulatus* L.

Sectio *Ozophyllum* Dumort. 1827, Fl. Belg.: 142, V. Novik. 1985, Pl. Vasc. Orient. Extr. Sov. I. 74. - Subgen. *Ozophyllum* (Dumort.) V. Krecz. et Gontsch. 1935,

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Fl. URSS, 3: 534. Perennials plants. All leaves usually on flowering stem. Leaves are cylindrical or compressed, septate, auriculate on the base. Cyme inflorescence has branches ended in flowerish glomerule. Stamens 6. Anthers shorter than perianth. Capsule unilocular. Seeds are not appendages.

Typus sectionis: *J. oxycarpus* E. Mey.

Subsectio I: *Septati* V. Novik. 1990, Bull. Soc. Nat. Moscou, 95, 5: 124. - Series *Acutiflori* V. Krecz. et Gontsch. 1935, Fl. URSS, 3: 541. Perianth-segments are narrow, lanceolate, long acuminate. Fruit is long rostrate, equal or longer than perianth-segments.

Typus subsectionis: typus sect.

J. atratus Krockner, 1787, Fl. Siles. I: 562; V. Krecz. et Gontsch. 1935, Fl. URSS, 3: 542; V. Krecz. et Barbarich, 1950, Fl. RSS Ucr. 3: 42; I. Grinț. 1966, Fl. RSR, II: 567; V. Novik. 1976, Fl. Part. Eur. URSS, 2: 72; Snogerup, 1980, Fl. Europ. 5: 109; Gheideman, 1986, Opređ. vâșș. rast. Mold. SSR, ed. 3: 102.

Hemicryptophyte. On the banks of water, boggy places. On eubase-mezobase soils, moderate-low acid, humidified through stagnant waters. Mesotrophe, hygrophyte.

Plant is rare for Bessarabia's flora. At first it was indicated by Gheideman T. (1954), but because of absence of authentic herbarium this species was excluded afterwards (Gheideman, 1975) from abstract of Moldova's flora. Up to present only one place of species growth is known: Chimishlia district, to the South of railway station Zlots. The plant was collected by Istrati A. I. 11.06.1971 in the forest on bog-place. The plant was confused with *J. articulatus*, from which it distinguishes by colour of perianth-segments, shape of capsule, leaves and seeds.

General spread: Species of Europe and Asia. It is met in continental areas of Europe and Asia. - $2n = 40$.

J. acutiflorus Ehrh. ex Hoffm. 1791, Deutsch. Fl.: 125; V. Krecz. et Barbarich, 1950, Fl. RSS Ucr. 3: 39 (cum auct. Ehrh.); I. Grinț. 1966, Fl. RSR, II: 564; V. Novik. 1976, Fl. Part. Eur. URSS, 2: 72; Snogerup, 1980, Fl. Europ. 5: 109.

Hemicryptophyte. In boggy pastures, at margins of springs. On oligobase, moderate acid, humidified through mobile water soils. Oligotrophe-mesotrophe, hygrophyte.

It is a rare plant. Up to present it was not known in Republic of Moldova. It was revealed in herbarium of Institute of Botany A. S. R. M. called *J. articulatus*, from which it distinguishes by more strong manners, inflorescence with erect branches, glomerule are reddish-brown, perianth-segments are clearly acuminate as well as through long rostrate capsule. There is known only one place in R. Moldova: Rashcani district, near village Boroseni, in moisture meadow. The species is known in the South of Bessarabia (Dubyna D. V., Șealeg-Sosonko Ju. P., 1989).

General spread: South, Central and Occidental Europe. - $2n = 40$.

Subsectio 2. *Ozophyllum* (Dumort.) V. Novik. 1982, Nov. Syst. Pl. Vasc. 19: 59, p. p. - Series *Supini* V. Krecz. et Gontsch. 1935, Fl. URSS, 2: 537 - Series *Alpini* V. Krecz. et Gontsch. 1935, l. c.: 537. - Series *Articulati* V. Krecz. et Gontsch. 1935, l. c.: 538. Perianth-segments are ovate to lanceolate-ovate. Fruit is short rostrated.

Typus subsectionis: *J. articulatus* L.

J. articulatus L. 1753, Sp. Pl.: 327; V. Krecz. et Barbarich, 1950, Fl. RSS Ucr. 3: 41; I. Grinț. 1966, Fl. RSR, II: 563; V. Novik. 1976, Fl. Part. URSS, 2: 72; Snogerup, 1980, Fl. Europ. 5: 111; Gheideman, 1986, Opred. vășș. rast. Mold. SSR, ed. 3: 102. — *J. lamprocarpus* Ehrh. circa 1791, Calam. No. 126 et ex Davis in Trans. Linn. Soc. 1810, 10: 135, nom. nud.; V. Krecz. et Gontsch. 1935, Fl. URSS, 3: 538.

Hemicryptophyte. On the bank of waters, in boggy meadows, ditches, on sand alluviums. On puddled soil, temporarily flooded, sometimes saline lands. Eutrophe, hygrophyte.

The plant is frequently met and spread on the whole territory of Bessarabia.

General spread: Europe and Asia, North and South Africa, North America.

— $2n = 80$.

J. alpinoarticulatus Chaix, 1786, in Vill., Hist. Pl. Dauph. 2: 378; V. Novik. 1985, Pl. Vasc. Orient. Ext. Sov. I: 76. — *J. alpinus* Vill. 1787, Hist. Pl. Dauph. 2: 233; V. Krecz. et Gontsch. 1935, Fl. URSS, 3: 537; V. Krecz. et Barbarich, 1950, Fl. RSS Ucr. 3: 40; I. Grinț. 1966, Fl. RSR, II: 571; V. Novik. 1976, Fl. Part. Eur. URSS, 2: 71; Snogerup, 1980, Fl. Europ. 5: 110. — *J. geniculatus* Schrank, 1789, Baier. Fl. I: 613; Czerep. 1981, Pl. Vasc. URSS, : 216, p. p.

Hemicryptophyte. On the bank of waters, on sand alluviums. On eubase-mesobase soils, moderate-low acid. Mesotrophe, hygrophyte.

It was proved (Hamet - Ahti, 1980) that species name *J. alpinus* Vill. is illegal. But name *J. geniculatus* Schrank, which was considered by some authors analogical to *J. alpinoarticulatus* Chaix should be referred to *J. articulatus* L.

On the territory between Dniester-Pruth rivers, only one place represented is known: on the bank of lake Beleu, Vulcăneshti district (State Reservation "Prutul de Jos").

J. alpinoarticulatus is the species spreaded around the polar, represented in Europe and Asia by 4 subspecies but in North America by 2 subspecies (Hamet-Ahti, 1986).

General spread: Area of species embraces Central and Atlantic Europe, South of Scandinavian, Mediterranean Region, Minor Asia, Siberia, North America. — $2n = 40$.

J. bulbosus L., 1753, Sp. Pl.: 327; V. Krecz. et Gontsch. 1935, Fl. URSS, 3: 537; V. Krecz. et Barbarich, 1950, Fl. RSS Ucr. 3: 38; (?) I. Grinț. 1966, Fl. RSR, 11: 575; V. Novik. 1976, Fl. Part. Eur. URSS, 2: 71; Snogerup, 1980, Fl. Europ. 5: 109.

It is a new plant of Bessarabia's flora. It is known from one place: Vulcăneshti district, near Giurguleshti village in valley of Pruth river, collected in 19.07.1979 by Nikolaeva L. P.

Hemicryptophyte. In riversides, in marshes, lakes and sand flooding places.

The species is very rare on adjacent territories. In the Ukraine it is met in forest regions to the right of Dnieper river (North territory) and Transcarpathian territory in valleys of rivers Latoritsa, Tisa and Borjava (Andrienko, 1983). In Romania it is known in Galats district, Hanu Conachi (Beldie, 1979).

This species is distinguished from others of this section by absence of rhizome, leaves of 4-5 cm in length, soft, narrow, filiform, light articulate and wide not more than 0,8mm, cyme inflorescence with branches ended by one glomerule formed from 3-5 flowers.

General spread: Area embraces Central and Atlantic Europe, the South of Scandinavian, penetrates also in Mediterranean region.

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